INTERNATIONAL MARITIME ORGANIZATION
4 ALBERT EMBANKMENT
LONDON SE1 7SR

Telephone: 0171-735 7611
Fax: 0171-587 3210
Telex: 23588 IMOLDN G

IMO

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Ref. T1/3.01

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To: IMO Members and other Governments
United Nations and specialized agencies
Intergovernmental organizations
Non-governmental organizations in consultative status

Subject: **Maritime year 2000 (Y2K) contingency planning exercises**

A workshop on maritime Y2K contingency planning exercises, aimed at maximising port community preparedness to deal with potential Y2K-induced disruptions and ensuring safety as well as continuity of commerce through ports, was convened in Berlin on 21 September 1999.

The Secretary-General, being anxious to ensure that all possible measures are taken to increase awareness of the year 2000 (Y2K) problem* and to assist Administrations and industry to prepare themselves, has agreed to circulate the outcome of that workshop (annex 1), as well as the contingency plan exercise guidance prepared by the workshop (annex 2).

The Secretary-General encourages Administrations to consider conducting Y2K contingency exercises using the guidelines contained in the annexes as part of their contingency planning and activities to deal with possible Y2K-related disruptions.

Member Governments are invited to bring the contents of this circular to the attention of port and offshore terminals as well as to shipowners, ship operators, shipping companies, seafarers, customs, port authorities, vessel traffic service operators, maritime pilots, hydrographers, classification societies, maritime communication authorities, shippers, charterers, insurance organizations and all other parties concerned, for information and action as appropriate.

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* Of relevance are:

- MSC/Circ.804, of 9 June 1997, on Impact of the Year 2000 on software systems;
- MSC/Circ.868, of 27 May 1998, on Addressing the Year 2000 problem;
- MSC/Circ.894, of 17 December 1998, on Addressing the Year 2000 problem: Co-operation within mandatory ship reporting systems;
- MSC/Circ.891, of 21 December 1998, on Guidelines for the on-board use and application of computers;
- resolution A.852(20) on Guidelines for a structure of an integrated system of contingency planning for shipboard emergencies; and
- Circular letter No.2121, of 5 March 1999, on Meeting on year 2000 (Y2K) problems.

ANNEX 1

OUTCOME OF THE MARITIME Y2K CONTINGENCY PLANNING EXERCISE WORKSHOP HELD IN BERLIN, GERMANY ON 21 SEPTEMBER 1999*

Introduction

1 Maritime Transportation Sector Workshop participants from France, Germany, United Kingdom, Italy, Russia, Japan, Canada and United States agreed on the importance of conducting contingency exercises in ports throughout the world to maximize port community preparedness to deal with potential Y2K induced disruptions, and to ensure safety as well as continuity of commerce through ports.

2 The workshop participants recommended that ports in the G-8 countries continue their efforts on completing remediation of affected systems, preparing contingency plans for ports and shipping and on conducting port exercises with voluntary participation from the shipping industry, terminals, and facilities.

3 A Y2K Contingency Plan Exercise Guidance has been adopted and is available to any port authority, and owners or operators of any vessel or shipping company anywhere in the world. International interest and cooperation by shipping organizations for conducting exercises is key to the success of this endeavor.

Benefits of Y2K contingency plan exercises

4 The benefits of contingency plan exercises are a key element of the guidance contained in IMO Circular letter No. 2121 and illustrate due diligence by nations to prepare for potential Y2K induced maritime transportation disruptions. Such benefits also include:

.1 sharing of lessons learned, open communication and synergy between nations;

.2 reducing tensions that may exist between trading partners unsure of the continuity of marine transportation;

.3 capitalizing on public-private nature of the global marine transportation system Y2K preparedness to improve links worldwide; and

.4 providing an excellent opportunity to demonstrate to the public the seriousness of preparation activities undertaken by stakeholders in the marine transportation system.

Methodology for contingency plan exercises

5 Worldwide Y2K contingency planning and exercising: Workshop participants developed a final action plan for exercises upon returning to their respective nations. The Y2K Contingency Plan Exercise Guidance describes potential problems, exercise steps, and contingency actions that must be anticipated in ports due to the Y2K transition. Workshop participants resolved methods for information collection and dissemination, public relations, and a suggested timeline for exercise development and execution with helpful points of contact for making port preparations. Each maritime nation was encouraged to sponsor their own exercise in a key port and share any lessons learned with the other countries in their region and their trading partners.

6 Workshop participants were encouraged to invite observers to contingency exercises and publicize

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* The results of the workshop, including electronic copies of annexes 1 and 2 are available on the U.S. Coast Guard internet site (www.uscg.mil/hq/g-m/y2k) to promote wide distribution.

port exercises via industry associations, public outreach and normal relationships. Pre- and Post- exercise handout information should be prepared by the lead organization in each port. Each exercise should be chronicled for presentation at other transportation contingency planning workshops and on Internet sites available to anyone worldwide.

Conclusion

7 Workshop participants agreed to the adoption of a plan of action by port authorities worldwide to conduct Y2K exercises. Upon completion of the workshop, a series of coordinated exercises would be conducted in ports throughout the world. Key international trade organizations should monitor and participate in exercise planning and coordination as appropriate. Post exercise reports and lessons learned should be disseminated to all participants, trading partners and neighboring states in the region. Interested maritime nations should recognize benefits and plan their own exercises.

8 It should be noted that prior to the Berlin Workshop, representatives from a number of key international maritime trade associations offered active collaboration in these contingency planning exercises. These international trade organizations also played a leading role in drafting the Year 2000 Code of Good Practice at IMO Headquarters in London in March 1999.

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ANNEX 2

CONTINGENCY PLAN EXERCISE GUIDANCE

Introduction

1 Preparation for the Year 2000 (Y2K) computer problem and the threat it poses to marine transportation system (MTS) operations has two major components. The first component is evaluation and repair of a ship or port facility's systems and equipment to ensure Y2K compliance. The second component is ensuring that well conceived contingency plans are in place to allow for continued operations if there are failures to critical systems or equipment despite all repair efforts. Many organizations have gone to great lengths to renovate and test systems and prepare detailed contingency plans for the Y2K roll over.

2 Once contingency plans are in place, exercises can be planned and conducted to ensure that the contingencies provide appropriate measures and controls to maintain operations during a critical failure. Exercising contingency plans allow the organization to test their ability to respond to different situations without a real emergency condition present. The exercises permit a test of interagency operations and provide the information necessary to ensure smooth operations in the event of an actual emergency. Conducting exercises also allows the organization to evaluate any problems with the plan and make corrective action prior to an actual event. Contingency plans developed in response to the Y2K threat will continue to play an important part in marine transportation system management, long after the roll over has occurred.

3 There are five recommended steps to plan, conduct, and evaluate a successful contingency plan exercise:

.1 Establish major objectives;

.2 Identify exercise participants;

.3 Develop exercise scenario(s);

.4 Conduct exercise activities; and

.5 Conduct post exercise analysis

4 The following sections outline the key considerations and activities of each step.

Establish major objectives

5 Primary concerns in dealing with maritime issues are promotion of personal safety, preservation of the environment, and the facilitation of commerce. These concerns must be the driving force in selecting the major objectives of the exercise. The objective identifies the functional area of the contingency plan that will be exercised. Objectives should be specific, realistic, results-oriented, and measurable.

6 Some of the categories for identifying objectives are contained in table 6.1 below:

Table 6.1 – Objective Categories

Objective Category	Objective Sub-Category
Safety	
	Navigation Safety
	Vessel Safety
	Emergency Response
Security	
	Vessel Security
	Terminal Security
	Intermodal Security
	Customs and Immigration
	Crime Response and Investigations
Environmental Protection	
	Shipboard Monitors and Systems
	Terminal Monitors and Systems
	Water and Air Quality Monitors
	Environmental Response Organizations
	Pollution and Living Marine Resource Law Enforcement
Commerce	
	Marine Exchange System
	Terminal Cargo Handling and Line Handling
	Computer Tracking Systems
	Intermodal Exchange Points
	Financial Systems
Recreation	
Defense	

7 Any combination of these categories may be used to identify objectives for the exercise. Objectives should be selected for those areas of the operation which are outside the organization's immediate control, have the highest risk of occurrence, or have the greatest impact on the operation. Multiple exercises may be necessary to achieve the desired objectives.

Identify exercise participants

8 As the exercise concept takes form, the appropriate participants can be identified, both within and outside of the initiating organization. Internally, participants must be identified to plan, conduct, and evaluate the exercises. Typically, a Director is named whose primary responsibility is to oversee all facets of the exercise planning, execution, and post exercise activities. This individual assigns the Design Team participants, provides guidance and ensures coordination with other organizations, develops and refines the exercise plan, and resolves conflicts among participants. The Design Team is comprised of the Exercise Planner, Controllers, Trainers, Evaluators, and other personnel as necessary. The Design Team provides the detailed planning and logistics for the exercise, ensures that sufficient controls and safety measures are in place, briefs and trains all participants, and collects post exercise information in order to modify and improve contingency plans based on exercise results.

9 Participants outside the organization may include ship owners, ship operators, maritime pilots, local vessel traffic service facilities, shipping agents, port authorities, government agencies, port and offshore terminals, and law enforcement organizations. Involving such business partners in the exercise process will help ensure their awareness and readiness of Y2K issues and encourage them to work cooperatively to prepare for potential Y2K disruptions.

Develop exercise scenario(s)

10 The objectives selected in paragraphs 5 and 6, combined with availability and interest of the participants, guide the development of the scenario. The scenario provides a brief description of the circumstances that result in the implementation of the contingency plan. For example, an oil spill may be the result of Y2K induced failure(s) of a flow rate or a liquid level sensor at an oil reception facility. The contingency plan relating to the control and remediation of the spill must be implemented. The exercise itself will test aspects of the contingency plan.

11 Exercises vary over a continuum of complexity from merely tabletop or telephone discussions through simulated system casualties to full scale testing and deployment of personnel and equipment. The following terms may be used to describe the various types of exercises.

.1 *Tabletop exercise*. A tabletop exercise is a walkthrough or talkthrough activity. It is designed to gather the key members of each responsible organization to discuss actions to be taken in executing contingency plans, policies, procedures, and interfaces. Participants discuss, examine, and resolve problems collaboratively.

.2 *Functional exercise*. A functional exercise is more extensive and realistic than a tabletop exercise and may involve some field activity. A functional exercise may focus on a system, procedure, interface, or specific contingency plan activity.

.3 *Full-scale exercise*. A full-scale exercise tests major portions of the port's business continuity efforts, incorporating a high degree of realism. It may include the movement of vessels or personnel and the deployment of equipment to demonstrate and test a coordinated contingency capability.

12 The type of the exercise should be based on the complexity of the waterways and port operations, the criticality of the port to commerce or national defense, and resources available to conduct the test.

Conduct exercise activities

13 Every exercise participant must be briefed on the exercise goals and the specific contingency plan activities that will be implemented during the exercise. Participants must understand their role during the exercises and be fully aware of the rules of play and any safety procedures. Controllers must monitor the status and progress of the exercise. Controllers may speed up or slow down the pace of activities, introduce supplemental activities as a further test of contingency plans, and suspend play to ensure the safety of participants or to accommodate actual emergency situations that may arise during the exercise.

14 All participants should be ready to record any information about the exercise that could be used to improve existing contingency plans. Means to document information during the exercise should be developed during the exercise planning process.

Conduct post exercise analysis

15 Post exercise activities involve a discussion among participants about the aspects of the exercise that were successful and about any aspects that should result in changes to the contingency plan. The major events of the exercise should be recapped and documented, significant problems encountered by the participants should be described along with potential resolutions to those problems, impacts to the contingency plan should be identified and documented, and an overall assessment of the exercise should be made by the Director. There are four key pieces of information that should be collected during this process for each lesson learned that is identified (see table 15.1 below).

Table 15.1 – Exercise results template

Item	Description
Observation	The situation that was observed or experienced by the participant.
Explanation	A description of how or why the situation occurred, or a statement about the impact the situation could have on operations. This can be combined with the Observation information.
Lesson Learned	Information as to how the situation could be improved.
Recommended Action	A specific plan to incorporate the lesson learned.

16 Sharing the results with the maritime community is also an important part of the post exercise activities. Information from ports with the resources to conduct exercises can be used by smaller ports to increase awareness and improve contingency plans without executing extensive contingency plan exercises. The results of the exercises can also be shared with the public to help alleviate their fears about Y2K and to build confidence that port operations can continue successfully regardless of the critical failures that may present themselves.

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